1 Introduction

PWS6600 comes with a 5.7" STN Liquid Crystal Display, and is water- and dust-resistant according to IP65.

The PWS is CE-marked and meets your need to be highly transient-resistant while in operation.

Also, its compact design makes connections with other machinery more flexible, thus achieving the optimal performance of your machines.

ADP is used to design applications of the PWS; it is reliable, user-friendly and compatible with many models.

The latest released ADP Version 6.1 and above can be used to design applications for the PWS.

2 Self Test

Once the PWS is turned on, it will automatically execute a self-test to check its hardware. The result of a self-test is displayed on the LCD. See below for items to check in a self-test:

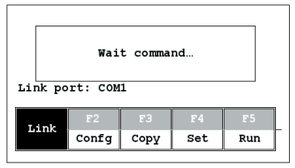
```
          Human Machine Interface
            ROM BIOS Version 2.1
              Copyright 2011

Display Type = Mono STN LCD
System RAM Size ........... 256K Bytes
Video RAM Size ............ 256K Bytes
Battery Backed RAM Size ... 512K Bytes
Application Memory Size ...   4M Bytes
Working RAM Test .......... Passed
Battery Status ............ Passed
BIOS ROM Checksum ......... Passed
Firmware Checksum ......... Passed
Application Checksum ...... Passed
RTC Function Test ......... Passed
Parameter Checksum ........ Passed
Communcation Port 1 Test .. Passed
Communcation Port 2 Test .. Passed
DIP Switches Setting(8..1)= 11011111
```

If any of tests does not pass the self-test, it will be noted with "Failed" next to the test item. Additionally, the message "Error! Press screen to continue" will be displayed at the bottom of the screen.

If the power to the PWS or the PC was interrupted while downloading, **Firmware checksum** or **Application checksum** will not pass the self-test, indicated by "Failed" in the self-test results after power is restored. If this happens, the user can simply follow the download procedure to re-download the application or data. After downloading again, all items should pass the self-test.

3 System Menu

Set the dip switch SW7=ON. After the self-test, the system menu of the PWS is displayed on the screen:

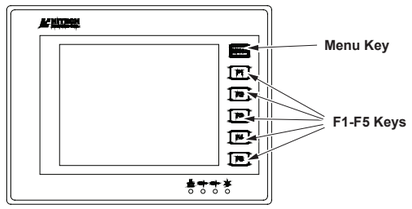


The functions of the commands are briefly explained below:

System Menu	Function
Link	The PWS is connected.
F2 - Confg	Sets up the internal time clock and communication parameters in the PWS. All the settings has to be made for the PWS to work properly. Use ↑, ↓, ← and → to move to desired field; + and - to set the value of the field.
F3 - Copy	Copies application data to the other same model of PWS.
F4 - Set	Calibrates the touch screen, adjusts LCD contrast and clears RAM data.
F5 - Run	Runs the application.

4 Keypad

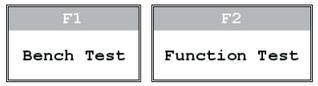
The six keys on the PWS include one menu key and five functional keys (**F1 -F5**). Press the menu key to slide out the innovative slide-out menu. For further details on the slide-out menu please see the ADP User's Manual



When a key is pressed, the PWS will make a "beep" sound to signal that a command is pressed. (The default setting is a 200 ms beep, and can be configured.)

5 Bench and Function Tests

Set the dip switches **SW3** and **SW4=OFF** to be able to run the bench and function tests for the PWS. Turn on the PWS and the following screen will be displayed.



The bench test performs an overall hardware test and the function test lets the user select which item to be tested.

Note:
The bench test will clear the application data of the PWS.

6 Setting Communication Parameters

There are two ways to configure working parameters; to set parameters in the PWS or in ADP.

To set parameters in the PWS, select **F2 - Confg** in the system menu.

Note:
Remember to set the dip switch **SW5=ON** if parameters are set in the PWS.

To set parameters in ADP, select **Application / Workstation Setup**. Then select the **Connection** tab to set communication parameters.

Note:
Remember to set the dip switch **SW5=OFF** if parameters are set in ADP.

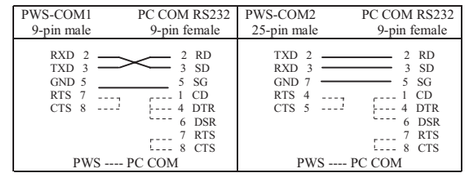
7 Adjusting Touch Panel

1. Touch the upper-left and lower-right corners of the screen.
2. Next follow the route on the screen.
3. Lastly touch the square on the center of the screen to complete the task.

Note:
Click **Clear Data Ram of Set** Key,the data stored in RAM will be erased.

8 Downloading an Application

Connect the RS232 port on the PC to the COM1 port on the PWS using a WPC-P8-42 cable. The connection can also be made according to the illustration below.

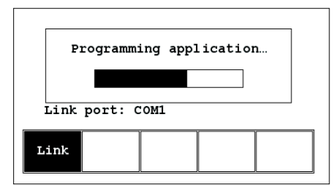


Warning:
To avoid an electronic shock, be sure to switch off the power before connecting the download cable to the PWS.

Set the dip switch **SW7 = ON**. After the self-test, the system menu will be displayed on the screen and the PWS is ready to download the application.

Start ADP and open the application file to be downloaded. Make sure that the communication parameters are correctly configured. Also remember to compile the file before downloading it. The file has to be compiled every time a change has been made in the file before downloading it.

Then select **Application/Download Firmware** and then **Application** in ADP if it is a first time to download the application to the PWS; otherwise, select **Application/Download Application**. The following appears on the screen while the PWS is downloading:



9 Uploading an Application

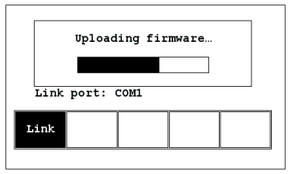
An application can also be uploaded from the PWS to the PC. Thus, a user can save an application as a *.V6F file in ADP for future use.

Warning:
To avoid an electric shock, be sure to switch off the power before connecting the communication cable to the PWS.

Make sure that the PWS and the PC are connected according to section "Downloading an Application". Set the dip switch **SW7 = ON**. After the self-test, the system menu will be displayed on the screen and the PWS is ready to upload the application.

Also make sure that communication parameters are correctly configured. Select **File/Upload Application** in ADP and the **Save As** dialog box will appear on the screen. Enter the name of a firmware file (*.AF6) to save. Click **Save**. Then the PWS will prompt for a password: enter the password set in ADP from **Application/Workstation Setup**. Once the correct password is entered, the PWS starts to upload the application to the PC. For information about setting a password, please see section "Setting a Password".

While the PWS is uploading, the following is displayed:



After uploading, select **File/Reconstruct Source** in ADP to display the **Open** dialog. Open the uploaded application file (*.C64 or *.AA6). The application screen will be displayed on the PC monitor. Finally, select **File/Save As** to save the application as a *.V6F file. Thus a source file can serve the purposes of maintenance and modification.

Note:
When using the PWS for the first time, make sure to first run the application once, or else the upload function will not work.

10 Uploading / Downloading a Recipe

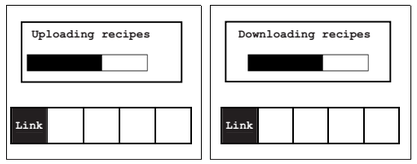
Set the dip switch **SW7 = ON**. After the self-test, the system menu will be displayed on the screen and the PWS is ready to upload/download a recipe.

Uploading a Recipe

Select **File/Upload Recipes** in ADP and the **Save As** dialog box will appear on the screen. Enter the name of a recipe file (*.RCP) to save. Click **Save**. While the PWS is uploading the recipe, **Uploading recipes** is displayed on the screen.

Downloading a Recipe

Open an application file with the recipe to be downloaded in ADP. Select **File/Download Recipes** to display the **Open** dialog. Enter the name of the recipe file (*.RCP) and click **Open**. While the PWS is downloading the recipe, **Downloading recipes** is displayed on the screen:



After the download is finished, select **F5 - Run** to run the application.

Remember to define the length and the number of recipes in the application. Also remember to upload the format of recipes from the PWS
before starting to edit a **new** set of recipe data in the PC.

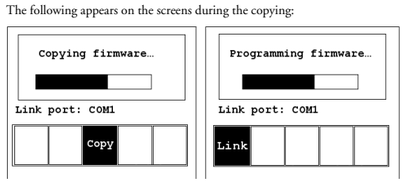
For further information about creating/editing recipes, please see the corresponding chapter in the ADP User's Manual.

11 Copying an Application

To copy an application from one PWS to another, select **F3 - Copy** from the system menu. Set the dip switch **SW7 = ON** and connect the two PWSs with a download cable. After the self-test, the system menu will be displayed on the screen.

Select **F3 - Copy** in the system menu from the PWS with the application to be copied. The PWS will prompt for a password: enter the password set in ADP from **Application/Workstation Setup**. Once the correct password is entered, the PWS will start to copy the application between the two PWSs.

The following appears on the screens during the copying:

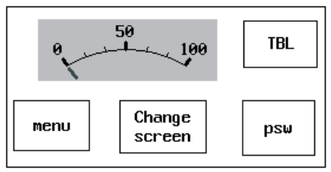


Note:
When copying for the first time,make sure to first run the application once, or else the copy function will not work.

12 Setting a Password

Scenario 1: Requiring a password to start the PWS

If the dip switch **SW6 = ON**, the user needs to enter a password to start the PWS. For this purpose, the designer can use the object **Action Button** in ADP to create a button which displays the password table on the PWS display. A user with the right to access the table can register passwords and user levels in the table.



In the illustration above, the TBL-button is an action button used to display the password table. When the button is selected the password table is displayed on the screen for a user with the right to access the table. Touch the password to highlight an area for entering a value.

How to configure an **Action Button** is described in the ADP User's Manual.

After registering passwords and user levels, set the dip switch **SW6 = ON** (i.e. password required). Restart the PWS and after the self-test the user will be prompted to enter a password in order to run the PWS. The PWS will determine the user level from the entered password. For instance, if the level of the password entered by the user is 2, then the PWS will set the user level to 2. User level 1 has the highest privilege and User level 9 has the lowest.

Note:
Only users of User Level 1 has the right of access to the password table.

Scenario 2: Re-entering a password

The object **Action Button** in ADP also allows the designer to create a button which asks the user to re-enter a password. For example, by pressing the **PSW**-button the password keypad will be displayed to prompt the user to enter a password. After entering the password, the PWS will update the user level according to the most recent password which has been entered. Therefore, this button can be applied to raise or drop one's privileges while the PWS is in operation.

How to configure an **Action Button** is described in the ADP User's Manual.

Scenario 3: Password-protecting a button in the PWS

The ADP can create a button which is protected by a password for execution. For example, a **Goto Screen** button can be designed with a high level of security; which means that a password with a high level of privilege is required in order to open the other screen. As the button is selected and the current user has a lower privilege than has been set for the button, the PWS will prompt the user for a password. The user will need a password with at least the level of privilege that has been set for the button. This function can restrict users to access to certain parts of the application.

Scenario 4: Requiring a password to copy or upload application

When selecting **F3 - Copy** in the system menu or **File/Upload Application** in ADP, the PWS will prompt for a password. The user will need to enter the correct password to copy an application from one PWS to another. Note that setting this password is different from the passwords set in Scenarios 1-3. To set this password, select **Application/Workstation Setup** in ADP. Under the **Password** tab, the project designer is able to set the password.

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